IN THE SPECIFICATION

At page 1, line 11, please enter the following:

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RELATED APPLICATIONS

This application is a continuation of serial number 09/845,776, filed April 30, 2001, now U.S. Patent No. ___________, which is incorporated herein by reference. --

On page 8, line 25, please add:

-- Fig. 10 is a graph of predicted productivity of sorption pumps according to the present invention when tested under specified benchmark conditions. --

Replace the paragraph beginning on page 18, line 13 with the following rewritten paragraph:

--- Fig. 1a illustrates a simplified schematic of an adsorption process **2**. Feed gas is fed in through tube **4** and valve **6**, through inlet **7** into adsorbent layer **8**. Simultaneously with passing a gas through layer **8**, a coolant flows through valve **9** and then through heat exchanger **10** which removes heat from adsorbent layer **8**. Cooling is necessary because more gas is adsorbed at low temperatures and because adsorption generates heat. Gas that is not adsorbed in the adsorption layer passes out through outlet **12** and valve **14**. At the end of the adsorption cycle, feed gas is shut off. --

Replace the paragraph beginning On page 37, line 7 as follows:

The Productivity Graph (see Fig. 10 ~~below~~) shows the productivity of several sorption devices of the current invention using a set of benchmark conditions. These include: (a) adsorbent channels filled with clean, dry zeolite 13x particulate to a density of ~0.67-g zeolite/mL channel; (b) CO_2 adsorbed to equilibrium at 760 mm Hg and 5 °C by flowing a 5 °C heat transfer fluid through the heat exchange channels and pure CO_2 through the adsorbent per Figure 1a; and (c) desorption of CO_2 at a pressure of 760 mm Hg resulting from the flow of 90 °C heat transfer fluid through the heat exchange channels (limiting the desorption temperature) per Figure 1b. A further constraint on this test, is that the productivity is defined for a single desorption of the device occurring in 1 minute (or less) from the time the high temperature heat exchange fluid starts flowing through the sorption unit or heating is initiated. Therefore, the productivity results in the Productivity Graph represent the mass of CO_2 desorbed in a single desorption per unit volume of sorption pump structure subject to the constraints given above. The theoretical maximum mass of CO_2 desorbed under these conditions can be estimated using Equation (2) and the volume and density (or mass) of adsorbent contained in the device. As noted previously, the actual working CO_2 production of such operations may be less than 100% owing to various factors such as partial loading of the adsorbent with water vapor. Maximum productivity would also not be attained if the sorbent did not reach the temperature of the heat exchange fluid. Accounting for this type of inefficiency, we have applied an efficiency factor of 0.85 in our calculations, a factor we expect to meet or exceed in routine operations. The results in the Productivity Graph are 85% of the maximum theoretical productivity.

On page 39, delete lines 1-4 including the graphic and graphic caption.